

Tennessee Brownfields Redevelopment Toolbox



Prepared by the Tennessee Department of Environment and Conservation (TDEC) and
in cooperation with the Association of State and Territorial Solid Waste Management
Officials

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Introduction

The Brownfields Redevelopment Toolbox was developed by the Association of State and Territorial Solid Waste Management Officials (ASTSWMO) State Response Program and Brownfields Operation Task Force in conjunction with the Tennessee Department of Environment and Conservation (TDEC).

Purpose of this Toolbox

The purpose of this Toolbox is to explain the Brownfields process in straightforward terms, and provide rural and smaller city governments/entities/communities with a systematic, start-to-finish, guide to Brownfields redevelopment. The Toolbox identifies five (5) steps in the Brownfields renewal process. The Toolbox provides a brief summary of each step, answers a series of Frequently Asked Questions (FAQs), and lists and summarizes available state and federal tools and incentives local governments may want to utilize in pursuing redevelopment of a Brownfields site in their community. A list of questions is presented at the end of Steps 1 through 3; based on the answers, the reader/user is directed to the appropriate next step for that project.

How to Use this Document

This Toolbox provides a framework for successful Brownfields project implementation. Familiarize yourself with this Toolbox prior to initiating a Brownfields redevelopment project and refer to it throughout the various stages of your project. The Toolbox is comprised of five steps, where each step corresponds to a phase in the Brownfields renewal process. Keep in mind, the Brownfields renewal process can sometimes be an iterative process and you may have to revisit certain steps. The following is a guide to navigating the Toolbox for effective completion of your Brownfields project.

1. For a general overview of the Brownfields redevelopment process, review the narrative summary provided at the beginning of each section.
2. Next, be aware that each Brownfields project is different; treat this Toolbox as a guide that must be adapted to meet the needs of your specific project, not as a one-size-fits-all approach. For example, if you are working to address a specific property that already has a completed an Environmental Assessment, you will begin the process at Step 3.
3. Follow this approach until environmental issues are resolved or until you reach Step 5, "Redevelopment of your Brownfields." This section provides

information that can assist you in addressing the issues inherent in marketing and developing a formerly contaminated property (or one where contamination has been properly and safely addressed but has not been completely eliminated.)

The Five Step Brownfields Renewal Process

The Toolbox breaks the Brownfields renewal process into five (5) steps:

Step 1: Site Identification and Project Planning

Step 2: How to Determine if you have Contamination on your Site

Step 3: Cleaning up your Site

Step 4: How the Tennessee Brownfields Program can help when a Site is Contaminated

Step 5: The End of the Line – Redevelopment of your Brownfields!

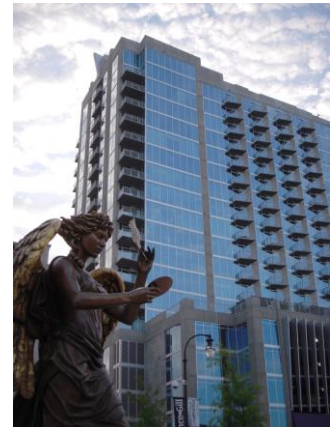
The Toolbox summarizes some of the federal tools available nationwide. In this section, you are provided information on programs, incentives, guidance, funding and other tools available to local governments by TDEC. In this section information is provided on how a local government can best access the available federal tools and incentives.

Finally, the Toolbox contains a list of useful documents and a comprehensive glossary of Brownfields-related terms and acronyms. The referenced documents and glossary provide you with additional information you can use to better understand the issues and terminology often encountered during the Brownfields redevelopment process. TDEC's Brownfields Program staff is also an excellent resource.

Step 1: Site Identification and Project Planning

This section provides guidance on how to identify Brownfields properties in your community, how to develop a revitalization plan to address those properties, and how to initiate project planning.

Experience has shown that successful Brownfields redevelopment comes in many forms and that each community has its own unique opportunities and revitalization goals. Regardless of a community's size, history, and number of Brownfields properties, planning ahead is extremely important.



SoBro, an area of Nashville that is undergoing brownfields renewal, was the former home of service stations, livery stables and lumber yards.

Successful project planning must consider the resources available for environmental investigation and cleanup of the property(ies), and determine how the property(ies) will be redeveloped and/or marketed for redevelopment. This is true if your community's goal is to develop a comprehensive revitalization plan for multiple Brownfields properties, or if you plan to redevelop just one contaminated property. Considering these issues early on can make a big difference in successfully meeting your community's Brownfields revitalization goals. The FAQs, recommended activities, and available tools below provide information to help you understand the process and guide your community through the site identification and project planning phase.

FAQs

What are Brownfields?

Brownfields are abandoned or underutilized properties, including but not limited to industrial and commercial facilities, where redevelopment or expansion may be complicated by possible environmental contamination (real or perceived). Brownfields are officially defined by the federal government in [The Small Business Liability Relief and Brownfields Revitalization Act of January 11, 2002](#), ("Federal Brownfields Law") as any "real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant." Specific examples of sites which could qualify as Brownfields include: abandoned gas stations, old factory and mill complexes, foundries, junkyards, mine-scarred lands, and other under-utilized or abandoned properties.



This property is a classic example of a brownfield. It has real or perceived contamination, is under-utilized, and taxes are owed to the local municipality.

Why is Brownfields redevelopment important?

Brownfields properties are often abandoned, with owners no longer maintaining the property or paying taxes. Abandoned properties can quickly become eyesores, and may attract vandalism and illegal dumping, which degrade the environment, depress our communities, and potentially put our health at risk. Productively reusing Brownfields reduces urban sprawl, increases the tax base, cleans up the environment, encourages urban revitalization and creates jobs for the community

and surrounding communities. Redeveloping Brownfields links economic vitality with environmental protection.

Brownfields redevelopment may also provide environmental, economic and social benefits in historically disenfranchised communities. The physical elements of such environments, may contribute to human disease and illness, economic disincentive, infrastructure decay, and overall community disintegration. Brownfields may contribute to additional burdens to environmental justice sites. The goal of environmental justice is to achieve socially equitable, environmentally healthy, and ecologically sustainable communities. Accordingly, brownfields redevelopment is one tool that can address the needs and goals of environmental justice communities.

How can comprehensive community involvement be achieved?

Comprehensive community involvement is important in identifying potential priority brownfields sites and in soliciting feedback from a cross-section of the population. This involvement can begin in a myriad of ways, including:

- Gain active community cooperation by identifying neighborhood associations and other grassroots organizations.
- Making meetings, events, and decisions accessible to all by considering logistical barriers that could prevent participation such as varying meeting times for people who work non-traditional work schedules and holding meetings at easily accessible locations.
- Promote culturally appropriate direct outreach and communication strategies by considering language needs, educational levels, etc.

What would be the advantage of having a “Brownfields revitalization” plan for my community?

Establishing a community-led Brownfields revitalization plan aids in removing environmental hazards from communities, eliminates the need to develop pristine open space and farmland, revitalizes communities by creating jobs, and returns property to productive use and onto local tax rolls. A community-based approach has the added advantage that community members have a direct role in determining how their Brownfields can be cleaned up and redeveloped to best facilitate the community’s future development plans.

Activities and Available Tools

If you have identified Brownfields properties in your community that you would like to do something about, you've taken the first step. So what are the next steps? This depends on what your community's plans or desires are for future development in your city, town or village. Some questions you should consider are:

- Does your community want to clean up Brownfields properties and market them to potential commercial, industrial or residential buyers or developers?
- Does your community want to retain some of these properties for its own use, perhaps for municipal or open-space purposes, or for affordable housing?
- Has your community been approached by potential buyers or developers who have been subsequently "turned off" because the property is a Brownfield?
- Does your community have (or want to develop) a comprehensive plan for revitalizing its Brownfields?

Brownfields Team

If the answer to any or all of the above questions is yes, your community may want to consider forming a "Brownfields team." A Brownfields team is typically a mix of public and private parties from your community who have an interest in



While a parking lot such as this may have environmental issues hindering redevelopment, it may be easily returned to productive use if the intended use is compatible with the types and levels of contamination present.

fostering well-planned, successful Brownfields redevelopment. The team can be as large or small or as formal or informal as the community needs. It can be tailored to the size and complexity of one specific project, or it can guide an entire revitalization vision. It can be made up of elected officials, planners, attorneys, environmental professionals, economic development officials, members of environmental and citizen interest groups and the like. The team can bring valuable perspectives from each member's area of expertise to help develop a mission and long-term and short-term goals based on the community's revitalization needs and desires.

In addition to forming a Brownfields team, it can be quite helpful to contact other local communities, private entities or professionals with previous Brownfields experience. TDEC and EPA have programs for Brownfields assessment and cleanup. They also have lists of local government and private contacts who are well-versed in Brownfields issues and would be happy to share their knowledge. Visit U.S. EPA's Brownfields homepage at: <http://www.epa.gov/brownfields/>. You may find additional information on Tennessee's Brownfields and voluntary cleanup program at: <http://www.state.tn.us/environment/dor/voap/>.

Determining the Intended Use for Brownfields Property

The intended use of a property plays an important role in the Brownfields revitalization process. If contamination is identified, the nature and extent of the contamination will have to be assessed. How that contamination is cleaned up, however, may be affected by the property's intended future use. For example, if the redevelopment plan calls for the construction of a light industrial facility, it may be appropriate to apply industrial investigation and cleanup standards that are less stringent than those that would be applicable to property that is to be redeveloped for residential use. Therefore, it is important to consider potential redevelopment plans from the outset of any Brownfields project.

If the intended use is not known at the beginning of the project, the community representatives or Brownfields team should make every attempt to identify the general type of desired development, whether industrial, commercial, residential or a mixed-use development. In the absence of that information, the most conservative cleanup assumptions would likely have to be made at every stage of the project. While this approach preserves the greatest number of options for development, this may significantly increase the time and expense of the project. These factors are discussed in greater detail in Step 3.

Financial Assistance for Community-Lead Brownfields Activities

Forming a Brownfields team and determining the best use of your community's Brownfields are important first steps but ones that do require resources. U.S. EPA offers Brownfields grants on a periodic basis (usually once a year, with grant application rounds normally beginning in the fall) to assist communities with various activities related to Brownfields revitalization. One of the grants U.S. EPA makes available to communities is the Brownfields Assessment Grant. This grant provides funding for property characterizations and assessments and activities to conduct planning and community involvement related to Brownfields sites. This grant can also provide funding for conducting Brownfields inventories (see section

below). In addition to funding for assessments, grants are awarded for cleanup and establishing revolving loan funds.

More information about the Brownfields Assessment Grant can be found on U.S. EPA's Brownfields Web page at: www.epa.gov/brownfields/assessment_grants.htm

Brownfields Inventories

Historical industrial or commercial property use often resulted in environmental contamination. If your community had an industrial past and now has abandoned or underutilized industrial or commercial properties, an inventory can help you identify the number and location of such properties. Then you can begin to consider what can be done for these properties to benefit the economic health and vibrancy of the community.

Communities are often in a good position to create Brownfields inventories. Local units of government have access to historical documents that can help determine which properties meet the definition of a Brownfield, and can conduct title searches to determine ownership. The local government and its Brownfields team will also be in a good position to know which of these Brownfield properties would provide the greatest redevelopment benefit to your community. This is a crucial initial step in prioritizing cleanup and redevelopment. Organizations that have local historical expertise such as senior citizen and scouting groups have helped communities successfully conduct Brownfields inventories.

This is usually done after receiving training from the Brownfields team or other state or local experts. You may want to enlist the help of a local volunteer service organization to maximize your Brownfields inventory efforts.



Knowing the history of your project is very important in understanding its issues. This is a photograph from the early 1900's of a locomotive roundhouse in Nashville, TN.

Planning Resources

It is important to plan ahead as much as possible. There are many resources available to assist your community in the planning process. See Appendix A for list of planning resources.

For more information on tools and financial resources to assist you with project planning and site identification that are specific to Tennessee, refer to Appendix B of this document.

Determining Your Next Step

The following series of questions will help you determine the next step in the Brownfields redevelopment process:

- Has your community identified a property(ies) where redevelopment is complicated by real or perceived environmental contamination, and the nature and extent of that contamination is not known?
 - *If "yes", Go to Step 2 "How to Determine if you have Contamination on your Site"*
- Has your community identified a property(ies) where contamination exists and the nature and extent of that contamination has been documented?
 - *Go to Step 3 "Cleaning Up your Site"*
- Has your community identified a property(ies) where contamination exists, documented the nature and extent of contamination, and analyzed the risks posed by that contamination?
 - *Go to Step 4 "How the Tennessee Brownfields Program can help when a site is Contaminated"*
- Has your community evaluated cleanup options for a Brownfields project and selected a remedial action?
 - *Go to Step 5 "The End of the Line – Redevelopment of your Brownfields!"*

Step 2: How to Determine if you have Contamination on your Site

Once you have identified potential Brownfields that your community would like to redevelop, the next step is to determine whether there actually are any environmental conditions present that may affect future use and redevelopment. This will assist you in determining what liability the community may have and possibly the cost it might bear if it chooses to take ownership and begin a cleanup.

Making a determination of whether a property is contaminated or not is accomplished by conducting an environmental site assessment, which includes a review of historical records, an inspection of the site and, quite often, collecting and analyzing soil and groundwater samples.

FAQs:

What is an environmental site assessment?

Environmental site assessments are typically conducted in phases, and are used to determine whether a site is contaminated or not. A Phase I environmental assessment is a review of all the records and knowledge associated with the property's historical record to see if there is the potential for the presence of contamination. If the Phase I indicates there is a potential for contamination, then the assessment of the site proceeds to the next phase. A Phase II involves sampling of the site and will help determine: the extent of contamination; the types and probable sources of contamination; the level of risk to humans and the environment associated with the contamination and whether the contamination needs to be cleaned up.



Petroleum sites are often in locations conducive to redevelopment.

Why should I do an environmental site assessment?

As with any large investment, you want to know what kind of additional costs you will incur before you finalize the purchase. In the case of a Brownfield site, you want to find out if the site is contaminated and, if so, how much it is likely to cost to clean it up before you buy it. An environmental site assessment can accomplish that task and, if it meets the requirements of the All Appropriate Inquiry rules (see the AAI FAQ below), limit your liability under the federal Superfund law. In addition, TDEC can provide for a similar release of liability under Tennessee law.

Who performs the environmental site assessment?

Environmental site assessments are typically conducted by environmental consultants trained and experienced in the areas of environmental investigation and cleanup. Federal regulations require that AAI investigations be carried out by qualified environmental professionals who meet certain minimum requirements. TDEC's Brownfields Team may have suggestions regarding when or if it is necessary to hire an environmental consultant.

For more information on hiring an environmental consultant, access the U.S. EPA Website at http://www.epa.gov/brownfields/aaai/HiringEP_Addendum_factsheet.pdf.

Who pays for the assessment?

Assessment costs are typically paid by the prospective purchaser, although under certain circumstances U.S. EPA or the state may be able to conduct these assessments at no cost to the municipality under their Targeted Brownfields

Assessment program. For more information about this program see Activities and Available Tools below.

Can I do an environmental site assessment before I own the property?

Yes. In fact, it is highly recommended that you conduct an environmental site assessment prior to purchasing any commercial or industrial property. Before conducting the assessment, be sure you have permission and access rights from the owner of the property. Municipalities and developers often make access rights and permission to conduct an environmental assessment part of their pre-purchase agreement with a property owner.

What is meant by “all appropriate inquiry” (AAI)?

All Appropriate Inquiry, or AAI as it is commonly known, is an environmental site assessment that meets the requirements of U.S. EPA’s All Appropriate Inquiry rule (40 CFR 312). Following the requirements of AAI in a pre-purchase environmental site assessment gives a prospective purchaser protection from CERCLA (aka Superfund) liability for those environmental issues that are identified by the AAI assessment.



Finding out the history of an area is an important part of a Phase I Assessment. This is a photo of the downtown Nashville Riverfront in 1947.

Prospective property owners who were never involved in any practices that might have contaminated the property (aka innocent landowners) as well as owners of contiguous properties are eligible for protection from CERCLA, if AAI is conducted prior to purchasing a property. In addition, to maintain protection from CERCLA liability, property owners must comply with certain “continuing obligations” provided in the statute.

For more information on the AAI rule, access the U.S. EPA Web site at <http://www.epa.gov/swerosps/bf/regneg.htm> .

Does TDEC require cleanup of this property?

In some cases, cleanup may not be required. This determination is dependent on the results of the assessment and can only be made by TDEC. Assessment and cleanup of properties must be done in conformance with the requirements of TDEC and in some cases U.S. EPA. Please see Section 4 of this Toolbox, and check with the TDEC Brownfields Program.

Might an environmental assessment performed several years ago meet the new AAI requirements?

No. Information from older Phase I reports may be used as a resource, but the 2002 Federal Brownfields Act requires that a Phase I assessment used to meet the

requirements of AAI must be completed within a year prior to taking ownership of the property. This is to ensure that the current environmental status of the property is known at the time the property is transferred. In addition, certain aspects of the AAI assessment must be completed within 180 days prior to the property transfer (i.e., on-site investigation, records search, interviews, and search for environmental cleanup liens). This protects the buyer from inadvertently accepting liability for contamination that may have occurred between the time the initial assessment was conducted and when the property actually transfers.

Activities and Available Tools

Phase I Environmental Assessments

A Phase I environmental site assessment requires that an appropriately qualified environmental professional review existing records concerning the site, research the operational history of the site, and conduct a site visit and interviews to determine if the potential exists for contamination at the site.

Phase I site assessments are used to identify existing or past signs of potential contamination at a property. Contamination can consist of hazardous substances and petroleum products as well as asbestos, lead-based paints, mold, and radon.



Sometimes Brownfields sites can also have public health and safety hazards.

If the Phase I assessment does not indicate a significant potential for environmental risk due to contamination at the site, then further investigation or cleanup may not be needed. You should consult TDEC for verification.

If the assessment is inconclusive or identifies potential contamination that poses environmental risk, further environmental assessment may be needed. Soil, sediment, soil vapor, and/or groundwater sampling may be required to determine whether the property is contaminated and if it needs to be cleaned up before it can be redeveloped. Sampling for contamination and determination of the need for cleanup at the property is conducted under the Phase II assessment.

Phase II Assessments: Sampling and Risk Assessment

A Phase II environmental site assessment is a detailed evaluation of environmental conditions at a property. This evaluation relies on the collection and analysis of soil, sediment, soil vapor and groundwater samples, and other measurements taken at the site to confirm and quantify the presence of environmental contamination at the property. Before and after conducting the sampling activity, it may be appropriate to involve TDEC to comment on the relevance and adequacy of the effort.

If contamination is confirmed and the levels of contaminants are known, an assessment of risks to human health and the environment may be conducted to determine how people and/or the environment could be affected. Once a risk assessment has been conducted or a comparison is made to state or federal cleanup standards, a decision can be made regarding whether or not the property poses an unacceptable environmental or health risk. If unacceptable risk is determined to exist at the site, a plan can be developed to clean up the property and reduce risks to humans and the environment.

The Phase II site assessment is designed to evaluate the degree of contamination and health or environmental risk posed by exposure to such contamination. It may not provide sufficient information to estimate the exact quantity of wastes to be addressed or the costs of cleanup. Additional work may be needed which is discussed in Step 3, "Cleaning up your Site."



Brownfields can have many unsightly characteristics, such as drums and graffiti as shown in this photo.

U.S. EPA Assessment Grants

Grants of up to \$200,000 are available to municipalities and quasi-governmental entities that bear no responsibility for causing the contamination at a site. These competitive grants are available on an annual basis for planning and assessment of Brownfields sites contaminated with petroleum or hazardous substances. For more information, see www.epa.gov/brownfields/assessment_grants.htm.

Targeted Brownfields Assessments

U.S. EPA Region 4 Office or TDEC's Voluntary Cleanup Oversight and Assistance Program (VOAP) may be able to assess Brownfields sites under a program called *Targeted Brownfields Assessment*. At the request of a municipality or non-profit the U.S. EPA can perform an assessment and assist in the planning process for redevelopment of Brownfields sites. These assessments are done at no cost to the requesting community at sites where there is a clear public benefit, and the community did not cause the contamination. For more information, check with the VOAP program or see <http://www.epa.gov/brownfields/tba.htm> .

Determining your Next Step

The following questions were developed to help determine your next step in the Brownfields redevelopment process:

- Did my environmental site assessment reveal any potential contamination or other recognized environmental conditions on this property?
 - *If no, go to Step 5, "The End of the Line – Redevelopment of your Brownfields!"*
 - *If yes, and you want to clean up the property before marketing it for redevelopment, go to Step 3, "Cleaning up your Site."*
 - *If yes, but you do not want to clean up the property prior to marketing it for redevelopment, go to Step 5, "The End of the Line – Redevelopment of your Brownfields!"*
- Does the contamination pose a risk to human health or the environment?
 - *If yes, then cleanup will likely be necessary, so proceed to Step 3 "Cleaning up your Site."*
 - *If no, and it does not affect the future use of the property, then proceed to Step 5, "The End of the Line – Redevelopment of your Brownfields!"*
- Does the contamination require cleanup or other corrective measures in order to protect human health or the environment, or can the contamination be addressed through a deed notice or other similar mechanism?
 - *Go to Step 3, "Cleaning up your Site."*
- What financial or human resources are available to address this project?
 - *Go to Step 4, "How the Tennessee Brownfields program can help when a site is contaminated."*

Step 3: Cleaning Up your Site

The results of your Phase II assessment may indicate that contamination on the property exceeds state and/or federal screening or cleanup standards. Cleanup may be necessary to either prevent exposure by future users of the site to contamination or to stop a release of contamination into the environment. This Step is intended to provide general information on cleanup and its role in the Brownfields redevelopment process.



This is a former land fill that was capped by the city of Johnson City for a state of the art soccer complex.

FAQs:

How do you know when a property needs to be cleaned up?

If, after conducting environmental assessments as described in Step 2, your sampling results exceed the cleanup levels recognized by TDEC or the risk assessment indicates that a potential risk to human health or the environment exists, it is likely that some form of cleanup is necessary.

Who do I need to consult to get help with cleaning up the site?

If you haven't done so already, you should hire an environmental consultant to work with you to develop and implement a plan to address the contamination at your site. Additionally, it may be necessary to hire an environmental attorney who is familiar with state and federal laws to assist you in dealing with the legal issues relative to the cleanup process. Finally, you should also contact the VOAP to ensure that any cleanup work you are planning to conduct will fulfill state requirements. See Step 4 for more information regarding TDEC's cleanup requirements.

How much will the cleanup cost?

The more information you have about the types and amount of contamination on your property, the easier it will be to estimate the cost to clean it up. In addition, determining future intended use for the property may allow you to tailor the cleanup and reduce the costs.

Incorporating cleanup activities into the general construction process or using innovative architectural designs can help reduce costs. For example, it may be possible to reduce the amount of contaminated soil needing to be excavated and disposed of by constructing buildings over less-contaminated areas, and/or paving areas of higher contamination to reduce exposure.

In addition, cost-effective remediation techniques designed to address contamination under buildings and in groundwater have been developed, and may be appropriate for your project. You may want to contact TDEC as they may be able to provide you with more information about these remediation techniques.

What types of cleanup might be necessary at Brownfields sites?

Soil, sediment, groundwater and indoor air may need to be cleaned up at a contaminated site. Techniques have been developed to address contamination in each of these media. The type of cleanup selected is based on situation-specific considerations such as type of contamination, amount of contamination, depth to groundwater, and extent of risk to human health or the environment. Additional cleanup might be necessary during the demolition phase to address issues such as asbestos or lead-based paint.

What are institutional controls?

In cases where the cleanup does not remove or address all of the contamination at the property to the most stringent of standards (e.g., for residential or unrestricted use), Institutional Controls (ICs) may be required as part of the cleanup. ICs are legally enforceable restrictions, conditions, or controls that limit or prevent the use of the property, ground water, or surface water so that future exposure to contamination can be prevented or minimized. In Tennessee, ICs are implemented as a Notice of Land Use Restrictions (NLUR).

NLURs are intended to reside in the property chain of title records and to be discovered when property ownership changes. By making future owners and others aware of the location of contamination, a less stringent cleanup option may be implemented that is just as protective of humans and the environment as a more “complete” cleanup. Some examples of restrictions include easements, activity and use limitations, restrictive covenants, well drilling prohibitions, deed restrictions, zoning restrictions, and special building permit requirements.

In Tennessee, the owner is usually the person that can place such instruments in the chain of title. Check T.C.A. 68-212-225 for more information on land use restrictions.

Activities and Available Tools

Types of Cleanups for Brownfields Sites



A former landfill was converted to a park and soccer complex.

The type of cleanup required at a Brownfields site depends on a number of factors. These factors include location, type and amount of contaminant(s) present, how widespread and deep the contamination is and the intended future use.

The most common types of cleanups include removal or treatment of contaminated soil, capping and/or covering the contaminated area, and cleaning up groundwater. However, additional methods for mitigating risks at Brownfields sites include the use of Institutional Controls (see IC FAQ above) and engineering controls. U.S. EPA has published a compendium

on cleanup options that can be found at the following web site:
<http://www.epa.gov/tio/download/misc/roadmap3edition.pdf> .

Engineering controls are constructed parts of a cleanup that act to cover (i.e. "cap") or limit exposure to residual contamination at the property. Engineering controls include soil, asphalt or concrete cover systems over residual contamination and the use of fences. In some cases, contamination at depth can be "capped" by a newly constructed building or roadway.

Because the amount of cleanup needed can be highly dependent on future use, it is very important to thoroughly assess the property in the early planning stages of your project. The assessment information may allow you to design appropriate but cost effective cleanup options that can be incorporated into the development process.

Importance of determining future use of the property

Brownfields redevelopment is essentially a real estate transaction, and any real estate transaction is affected by location, location, location. A key question that must be answered for every Brownfields redevelopment project is "Will a return on my investment be realized?" To determine that, you need to know what the cost of cleanup will be.

What constitutes a successful and protective cleanup has evolved over the past several decades from an expensive “remove it all” approach, regardless of how low the actual risks to humans and the environment might be, to a more measured, risk-based approach where low levels of contamination can be left on site if properly controlled. The risk-based approach recognizes that any cleanup must be protective of human health and the environment, but cleanup need only go as far as necessary to make the site safe for its intended use. For example, cleaning up a site to single family residential use exposure levels is unnecessary if the property is to be used as a warehouse or convenience store. The reverse is also true. You wouldn’t want a less stringent cleanup that is appropriate for an industrial use to occur where homes were to be built.



An end use for a Brownfield could be a parking lot, where the parking lot is used as a cap.

So, the intended future use of a site can determine the extent of cleanup that will be required. It is just as true that the extent of cleanup can determine the future use of a site. Sometimes the intended use of a site is known from the beginning and the cleanup is tailored for that use. In other cases, available funding limits the extent of cleanup, which may then dictate more limited options for future use. Knowing the intended future use can significantly affect the cleanup both in scope and cost.

State Acknowledgement of Completion of Cleanup

One of the benefits of conducting a cleanup under the guidance of TDEC is that in return for completing cleanup to the satisfaction of the state, you may be able to receive a release from liability and/or state approval when you complete the cleanup. In Tennessee, written acknowledgement is provided in the form of a *No Further Action letter*. If the letter is issued under a Brownfields Agreement negotiated with TDEC, you may also be eligible to receive a release of liability under applicable state Environmental statutes. These may be used to demonstrate to prospective purchasers, future users of the site, lenders, the local community, and other interested parties that contamination issues have been resolved and the site is safe for reuse. For more information about whether or how TDEC provides acknowledgement of completion of a Brownfields cleanup, refer to Step 4.

Loans and Grants available for Funding Cleanup

One of the biggest barriers to cleanup of Brownfields properties is financial resources. U.S. EPA Brownfields cleanup grants are an excellent source of funding for cleanup of Brownfields properties (see Step 1, "Site Identification and Project Planning"). Since the grants are highly competitive and applications are only accepted once a year, your project should have some flexibility built in for these constraints.

More information about the Brownfields Cleanup Grant can be found on U.S. EPA's Brownfields Web page at: http://www.epa.gov/brownfields/cleanup_grants.htm . Also see Appendix A for a list of other federal or regional loan and grant programs.

For more information on tools and financial resources to assist you with project planning and site identification, refer to Appendix A of this document.

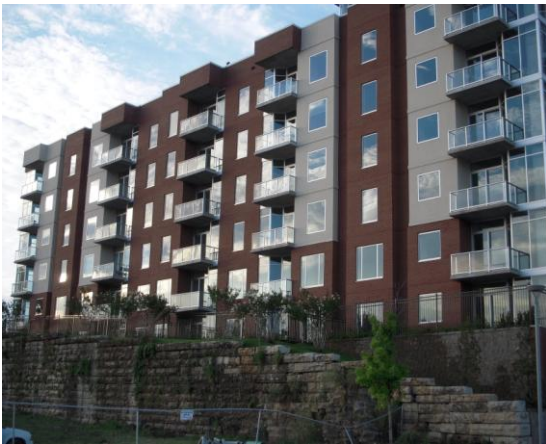
Determining your Next Step

- Have you completed cleanup prior to redevelopment?
 - Go to Step 5 "*The End of the Line – Redevelopment of your Brownfields!*" for assistance in marketing or developing your Brownfields site.
- Have you identified but not addressed all environmental concerns at the property, and do not intend to clean up the property prior to selling it
 - Go to Step 5 "*The End of the Line – Redevelopment of your Brownfields!*" for assistance in marketing your Brownfields site.
- Do your cleanup activities require Institutional Controls and have they been appropriately filed and recorded according to applicable statute and regulation?
 - Go to Step 4 "*How the Tennessee Brownfields Program can help when a site is Contaminated*" which provides contacts and information specific to the requirements of Tennessee.
- If you know who the purchaser of the property will be, have you conveyed the content and responsibilities of the Institutional Controls to them?
 - Go to Step 5 "*The End of the Line – Redevelopment of your Brownfields!*" for assistance in marketing your Brownfields site.
- If your site requires long-term maintenance, have you made plans to fund and carry out those obligations or made arrangements for others to do it on your behalf?
 - Go to Step 4 "*How the Tennessee Brownfields Program can help when a site is Contaminated*", which provides contacts and information specific to the requirements of TDEC.

Step 4: How the Tennessee Brownfields Program can help when a Site is Contaminated

Assessment and cleanup of properties must be done in conformance with the requirements of the TDEC and in some cases, U.S. EPA. This section explains how to locate information about the Voluntary Cleanup Oversight and Assistance Program (VOAP).

The Tennessee Department of Environment and Conservation has its own cleanup programs that are separate and distinct from U.S. EPA's Superfund cleanup program. Eligibility, technical requirements, timeframe, fee structure, liability relief, and level of oversight vary according to the site.



This former Brownfields site in Nashville, TN was transformed from a rail yard to a luxury loft complex.

There are many advantages to conducting a cleanup under a TDEC program. Most importantly, you can receive a No Further Action letter when you have addressed the site to TDEC's satisfaction. These letters can be used to demonstrate to lenders, prospective purchasers and future users of the site that contamination issues have been resolved, and that neither you nor they will be held liable for past contamination at the site. This is extremely helpful when you or a developer are trying to obtain financing for the project. And in addition to receiving protection under applicable Tennessee laws, successful cleanup under the VOAP may also provide relief from U.S. EPA requirements for response actions at the property.

Basic information about each state's cleanup program can be found in U.S. EPA's February 2005 publication, "State Brownfields and Voluntary Response Programs: An Update from the States" (EPA-560-R-05-001). For additional information specific to TDEC, please call 615-532-0900 and ask to speak to the Manager of the VOAP.

Step 5: The End of the Line – Redevelopment of your Brownfields

By working through Steps 1 through 4, you have quantified the environmental concerns at your Brownfields site. You have either addressed those environmental concerns through cleanup or Institutional Controls, or you have documented them for a future developer to address as part of development. Assessment is complete; actions were taken, or plans were developed, for resolving unacceptable environmental risks. The property is ready for redevelopment.

Now that you have resolved the initial challenges associated with the environmental aspects of the site, you can turn your attention to the final steps. You may be marketing your now-clean property, trying to ensure a good return on your investment, and doing your best to attract the right developer. You will be



The Peace and Justice Center is home to the Public Defenders office in Knoxville, TN. It is located on a portion of the former Foote Mineral facility.

facing the challenges inherent in any development project, such as providing appropriate infrastructure, but you also need to convince future buyers and occupants that the site is safe for their use.

You may be redeveloping the property yourself instead of seeking to sell to a developer. In this case, return on investment is not necessarily a primary driver, but you will still need to address infrastructure. You will also need to convince future occupants or users that the site is safe for their reuse.

Alternatively, you may have decided not to clean up the property yourself, but instead to market it for simultaneous cleanup and redevelopment. This is most likely to be successful when contamination at the property has been quantified and final cleanup costs can be determined with certainty.

This section:

- Provides information on federal and state financial and technical resources that may be available to help with planning and financing redevelopment;
- Provides advice on managing the issues inherent in developing a property with contamination;
- Details the activities involved in marketing a Brownfields site.

Depending on your plans for redeveloping the property, a variety of federal and regional resources may be available to you. With answers in mind to the questions below, consider the FAQs listed below and the resources described in Appendix A.

- Do you plan to redevelop the site, or to sell/market the site once clean up has been completed, and allow the buyer to redevelop the site?
- Will a public or private entity redevelop the site?
- Is the intended use a public or private use?
- Did you start this entire process with a planned, known reuse for the site, or are you still developing your reuse plans?
- Is your site in the heart of a bustling urban center or in a rural setting?
- What infrastructure exists at the site?
- Will the reuse be residential, commercial, industrial or open space?



Now select the tools that appear most applicable, and work with your local and state economic development specialists to move from planning into redevelopment.

The former Alley Cassetty Coal Yard remained idle for a number of years before developers cleaned up the site for use as a maintenance facility.

FAQs:

If my property has a deed restriction/Institutional Control/environmental covenant incorporated into the environmental risk management plan, how will this impact the marketing and redevelopment of the site?

If your site is safe for reuse but has a deed restriction, developers and occupants will need to be made aware that in certain areas some uses are either prohibited (i.e., residential development or daycares are not permitted) or require special consideration (i.e. excavation below 6 feet requires a soil management plan). Developers will need this information to formulate the best plan for reuse of the property. Potential owners or occupants need this information so that they can safely use the property and so they can fulfill any ongoing obligations associated with the deed restriction. These obligations are site and state-specific and may include periodic review and reporting of site conditions, operation of a remediation system, or payment of an annual fee. You should check with TDEC's Brownfield program to determine whether any such ongoing obligations apply to your site.

What information generated during assessment and cleanup will developers, lenders, and potential occupants request during the development stage, and how should the information be presented?

At a minimum, most developers, lenders and potential occupants will want to be assured that the site has been appropriately cleaned up and completed under TDEC guidance and/or federal cleanup programs. They may also be interested in reviewing the closeout report and having a copy of the site closure letter received from the TDEC's Brownfield Program or its designees. Other documents of interest may include the Phase I and II assessment reports and documentation of remediation activities. TDEC retains copies of these documents in their files for the public to review. You may also want to set up an information repository in a local library to facilitate review.

What role, if any, will local, state or federal environmental staff have during the redevelopment phase?

You should ask this question as you access specific resources to assist you with redevelopment. The answer is highly dependent on site specifics, state law, and the type of federal or local resources that have been accessed to assist in redevelopment. You should also check with TDEC to determine whether redevelopment of the property may trigger any further state involvement.

Activities and Available Tools

Tip for Success No. 1 – Establish and maintain a well-rounded Brownfields Team

If your Brownfield Team does not already include local, regional, state or federal economic development agency staff, look to the resources described in Appendix A best suited to help with your project.

Tip for Success No. 2 – Establish clear goals

Work with your Brownfields Team to develop appropriate locally supported redevelopment goals for your site.

Tip for Success No. 3 – Identify available tools

Use your redevelopment goals/plan to identify and utilize appropriate tools throughout redevelopment.

Tip for Success No. 4 – Work to make your site(s) "shovel ready"

Based on the redevelopment goals for the site, identify and utilize the tools that will make your site 'shovel-ready' for development. A shovel-ready site is one where as many regulatory hoops as possible have been cleared in advance of redevelopment. This is a critical step if you plan to market the property for sale

prior to redevelopment because you will clear regulatory hurdles for the purchasing developer.

Tip for Success No. 5 – Market your site

Market your redevelopment project. Local and state economic development staff can be particularly well-versed in strategies and available avenues for marketing. Coordinating with these representatives will help assure success.

APPENDIX A

Please note that the resources referenced below are often implemented at the regional, state and local levels, so it is important to include regional, state and local economic development specialists in your Revitalization Team.

Tennessee Brownfields Program

Please see Appendix B for more details about the program and contact information.

U. S. Environmental Protection Agency Brownfields Program (U.S. EPA)

<http://www.epa.gov/brownfields/>

<http://www.epa.gov/region4/>

U.S. EPA provides grants to fund assessments and cleanups of Brownfield sites. Grants are also made to capitalize revolving loan funds to clean up Brownfield sites or fund job training programs.

***THINK ABOUT...**using assessment grants to identify and prioritize Brownfield sites for redevelopment or quantifying the degree of cleanup needed to get the site "business ready." Cleanup grants often need to be pooled with other cleanup funds unless the cleanup is minor. Non-profits such as urban renewal authorities are eligible recipients of cleanup grants.*

Tennessee Development Districts Association(TDDA)

The TDDA is an excellent resource for rural communities throughout Tennessee. See Appendix C for more information.

National Association of Development Organizations (NADO)

<http://www.nado.org/rf/innocenters/brown.php>

Since 2001, NADO has been dedicated to assisting regional development organizations across the country. Through their Research Foundation they have sought to raise awareness and examine issues related to contaminated property revitalization and redevelopment in small metropolitan and rural America. They have released a series of documents specifically addressing reclaiming such properties in rural America all of which are available on their website. Their resource guide is highly recommended reading for brownfields stakeholders and can be found at <http://www.nado.org/pubs/rguide04.pdf>.

***THINK ABOUT...**using NADO to identify potential resources specifically targeted to smaller municipalities and rural communities.*

International City/County Management Association (ICMA)

<http://www.icma.org/main/topic.asp?tpid=19&hsid=10>

Since 1914, ICMA has offered a wide range of services to its members and the local government community. The organization is a recognized publisher of information resources ranging from textbooks and survey data to topical newsletters and e-publications. ICMA provides publications, data, information, technical assistance, and training and professional development to thousands of city, town, and county experts and other individuals on a variety of issues including redevelopment of contaminated properties.

***THINK ABOUT...**using ICMA resource documents to gain additional knowledge on addressing and redeveloping contaminated properties.*

National Association of Local Government Environmental Professionals (NALGEP)

<http://www.nalgep.org/issues/brownfields/>

NALGEP represents local government personnel responsible for ensuring environmental compliance and developing and implementing environmental policies and programs. Their Brownfields Community Network frequently sponsor webcasts aimed at empowering localities to revitalize their communities through the exchange of strategies, tools, and best practices for brownfields cleanup and reuse.

***THINK ABOUT...**using NALGEP resources as a forum for exchanging lessons learned and expanding a communities knowledge base on a variety of redevelopment issues.*

U.S. Department of Housing and Urban Development (HUD)

<http://www.hud.gov/offices/cpd/economicdevelopment/programs/rc/resource/brwnflds.cfm>

Provides block grants and competitive awards for revitalizing entitlement communities (targeted to state and local governments), offers federally-guaranteed loans for large economic development and revitalization projects, typically in entitlement communities (targeted to state and local governments), provides priority status for certain federal programs and grants for HUD-designated Empowerment Zone or Enterprise Communities (targeted to 80 local governments with low-income or distressed areas), and provides options for meeting safe and affordable housing needs in developed areas.

The six applicable HUD programs listed below provide resources for the renewal of economically distressed areas sites.

- Community Development Block Grant Program;
- Section 108 Loan Guarantee Program;
- Brownfield Economic Development Initiative
- HOME Investment Partnership Program;
- Empowerment Zones and Enterprise Communities Initiative; and
- Lead-Based Paint Hazard Control Grant Program.

Appalachian Regional Commission (ARC)

<http://www.arc.gov/index.do?nodeId=1765>

ARC provides grants for roads and highways (targeted to state and local governments in the 13 Appalachian states), and offers planning and technical assistance to attract private investment to distressed areas to support new uses (targeted to local governments and development districts/non-profit entities in some cases).

Contact Eric Stockton
Appalachian Regional Commission
1666 Connecticut Avenue
Washington, DC 20009-1068
(202) 884-7752
estockton@arc.gov

***THINK ABOUT...**tapping ARC funding to meet site access road and similar infrastructure support needs of projects, including mine scarred lands...or helping cover planning costs at sites being reused.*

U.S. Department of Agriculture (USDA)

Forest Service

www.fs.fed.us

The Forest Service provides technical assistance for projects in selected areas (targeted to EPA grantee, local governments, federal Empowerment Communities and Enterprise Zones) and offers technical and financial assistance for sustainable redevelopment and reuse projects (targeted to state and local governments and community-based groups in Atlanta, Seattle, New York, Chicago, San Francisco, Los Angeles, Denver, Las Vegas, East St. Louis, South Florida (four county area), Philadelphia, Boston, and Buffalo).

Rural Development Agency (RDA)

www.rurdev.usda.gov

USDA provides grant, loan, and loan guarantee assistance for a variety of business, commercial, and industrial projects in small towns and rural areas, supports the installation and improvement of critical infrastructure needed to support economic development, and helps finance the construction of key public facilities - sewer systems, firehouses, etc - that can support property revitalization efforts.

***THINK ABOUT...**using USDA/RDA resources to meet various project needs within the context of small town or rural needs --real estate acquisition, cleanup, demolition, working capital, water and sewer system improvements, and supportive community facilities.*

U.S. Department of Commerce Economic Development Administration

<http://www.eda.gov/Research/Brownfields.xml>

EDA funds infrastructure enhancements in designated redevelopment areas or economic development centers that serve industry and commerce, provides planning grants, offers revolving loan funds and loan guarantees to stimulate private investments.

***THINK ABOUT...**using EDA to address cleanup and site preparation needs at reviving industrial areas...street, utility, port, and other infrastructure needs at project sites...site revitalization planning...site marketing.*

Small Business Administration (SBA)

<http://www.sba.gov>

SBA provides information and other non-financial technical assistance for redevelopment efforts, offers loan guarantees to support small businesses, and assists in developing management and marketing skills.

***THINK ABOUT...**using loan guarantees to attract capital to small businesses once sites are clean...using CDCs to help underwrite and finance building expansions or renovations...using informational resources available to help with loan documentation and packaging.*

U.S. Department of the Interior National Park Service (DOI)

http://www.nps.gov/rtca/whatwedo/recent_innovations/wwd_ri_groundwork.html

DOI provides technical assistance for planning, assessment, and conservation in urban areas, assists in acquisition of surplus federal lands, and offers technical assistance for community revitalization.

THINK ABOUT...enhancing redevelopment projects with parks and open space amenities.

U.S. Department of Justice (DOJ)

Weed and Seed Program

<http://www.ojp.gov/ccdo/ws/welcome.html>

DOJ's Brownfields Special Emphasis Initiative gives communities unsuccessful in seeking EPA funding a "second chance" to carry out initiatives aimed at site preparation and development, and community outreach and participation (targeted to Weed and Seed program grantees), advises and assists with the use of EPA Brownfields funds to clean up meth labs, and assists in crime prevention and improving the community climate through neighborhood restoration and crime prevention.

THINK ABOUT...plugging key community involvement, reuse planning, cleanup, and project development financing gaps when other funding sources fall through...using community outreach services to address site and neighborhood safety issues that can stigmatize contaminated sites.

U.S. Department of Labor (DOL)

<http://www.doleta.gov/>

DOL offers technical assistance linked to job training and workforce development in Brownfields Showcase Communities.

THINK ABOUT...using training and workforce development services as a cash flow offset incentive to companies locating at Brownfields sites.

U.S. Department of Transportation Federal Transit Administration (DOT)

http://www.fta.dot.gov/funding/grants_financing_263.html

DOT provides grants for transit capital and maintenance projects, offers discretionary capital grants for new fixed guideway transit lines, bus-related facilities, and new buses and rail vehicles, funds transportation and land-use planning, and promotes delivery of safe and effective public and private transportation in non-urban areas.

THINK ABOUT...enhancing site marketability with transit access...planning for and cleaning up sites used for transportation purposes...identifying contaminated sites for stations, lots, and other transit purposes.

U.S. Department of Transportation Federal Highway Administration (FHWA)

http://www.fhwa.dot.gov/environment/bf_disc.htm

FHWA provides funds that can be used to support eligible roadway and transit enhancement projects related to property redevelopment – targeted to state and local governments and metropolitan planning organizations.

THINK ABOUT...using FHWA resources to cover some cleanup, planning and/or development costs, freeing up resources for other purposes...reconfiguring or modernizing roads or other transportation infrastructure to make them more complementary to site reuse opportunities...or to provide transportation related access or amenities that enhance site value.

Federal Housing Finance Board (FHFB)

<http://www.fhfb.gov/Default.aspx?Page=44&Top=3>

FHFB funds community-oriented mortgage lending for targeted economic development funding. Funds are targeted towards a variety of site users and can be accessed through banks. FHFB subsidizes interest rates and loans to increase the supply of affordable housing and funds the purchase of taxable and tax-exempt bonds to support redevelopment.

THINK ABOUT...using FHFB to attract more lenders to specific cleanup and redevelopment projects.

General Services Administration (GSA)

http://www.gsa.gov/Portal/gsa/ep/contentView.do?contentType=GSA_OVERVIEW&contentId=10033&noc=T

GSA works with communities to determine how underused or surplus federal properties can support revitalization.

THINK ABOUT...incorporating former federal facilities into larger projects, to take advantage of site assessment resources.

Office of Energy Efficiency and Renewable Energy/Center of Excellence for Sustainable Development.

<http://www.smartcommunities.ncat.org/>

This DOE office serves as a resource center on sustainable development, including land use planning, transportation, municipal energy, green building, and sustainable businesses.

Office of Building Technology, State and Community Programs (BTS).

<http://www.eere.energy.gov/>

BTS works with government, industry, and communities to integrate energy technologies and practices to make buildings more efficient and communities more livable. The resources available through BTS can help ensure that contaminated property cleanups are connected to energy efficiency and sustainable redevelopment.

Other Financial Mechanisms for Assessment, Cleanup and Redevelopment of Contaminated Property

Tax Increment Financing: A Brief Overview

One approach to financing the cleanup and redevelopment of contaminated properties is the creation of a tax increment financing (TIF) district. TIF is a financing technique wherein bonds are issued to fund redevelopment and the bondholders are repaid through the new or incremental tax revenues generated by new construction/development. Usually, urban renewal authorities and downtown development authorities have the ability to create a TIF district. Under T.C.A. 68-212-226, it is possible for a local government to use Tax Incremental Financing at address a Brownfields project.

For example, suppose a municipality creates a Tax-Increment-Financing (TIF) District to facilitate redevelopment of several adjacent properties, including aging and vacant industrial buildings and former rail yards. Once the properties within the TIF district are

redeveloped, property values will increase, which results in increased tax revenues. Property tax revenues from the TIF district are split into two revenue streams:

1. The first stream (base) is equal to the "As-Is" property tax revenues without redevelopment and goes to the same city, county, school district, and other taxing entities (the base is allowed to increase with the market over time).
2. The second stream (increment) is the net increase in property taxes resulting solely from new development. The increment can be used to fund the redevelopment through Tax Increment Financing, which diverts the increment revenues to pay for annual debt service on construction bonds.

APPENDIX B

Tennessee Brownfields Program

General Information

Contact: Andy Shivas
Address: Tennessee Department of Environment and Conservation (TDEC)
4th Floor, L&C Annex
401 Church Street
Nashville, TN 37243-1538
Phone: (615) 532-0912
Fax: (615) 532-0938
Email: Andy.Shivas@state.tn.us
Web site: <http://www.state.tn.us/environment/dor/voap//>

Program Description

Brownfields definition: Any abandoned, idle, underutilized, or other property whose reuse, growth, enhancement or redevelopment is complicated by real or perceived adverse environmental conditions.

Program titles: Voluntary Cleanup Oversight and Assistance Program (VOAP)

Liability relief provisions: Participants can receive a No Further Action (NFA) letter and release of liability under any statute administered by TDEC for investigation, remediation, monitoring, and/or maintenance of contamination identified and addressed in a voluntary agreement or consent order. With certain conditions and limitations, liability protection may extend to successors in interest or in title to the participant, contractors conducting response actions at the site, developers, future owners, tenants, and lenders, fiduciaries, or insurers. Third party contribution protection may be provided if certain notice requirements are met.

Financial incentives (grants, loans, tax provisions, etc.):

- Dry Cleaning Environmental Response Program Trust Fund (DCERPTF)—Can possibly be used to clean up eligible active and abandoned dry cleaning sites. In order to utilize the fund, fees, and deductibles are required by program participants.

- Tax Increment Financing (TIF)—Can be used by local governments that have jurisdiction over any part of a brownfields project.

- Federal Funds—Grants or loans from federal funds available to TDEC and any state funds used as a match to obtain federal funds in certain cases may be used by municipalities, counties, and/or other governmental instrumentalities to assess and clean up sites.

Legislative or program site eligibility requirements: By statute, parties that did not release, generate, or transport contamination to be addressed may enter into a voluntary agreement. While responsible parties (RPs) are not eligible to enter into voluntary cleanup agreements, they may enter into consent orders to conduct voluntary cleanups.

Sites on or proposed for listing on the federal Superfund program's National Priorities List (NPL) may not be subject to

a voluntary cleanup agreement or consent order without the concurrence of EPA.

Financial Elements

Assessment and cleanup funding (source, amount, relationship to VCP/brownfields programs, application process, eligibility requirements, dedication to special types of sites such as petroleum, dry cleaners, abandoned drug labs, etc.): DCERPTF can be used to clean up eligible active and abandoned dry cleaning sites provided that the applicant pays all delinquent DCERP fees. A solvent surcharge paid by dry cleaners and suppliers and an annual business registration fee are the significant sources of funding.

Federal Funds—By statute, parties that did not release, generate, or transport contamination to be addressed may enter into a voluntary agreement. While

responsible parties (RPs) are not eligible to enter into voluntary cleanup agreements, they may enter into consent orders to conduct voluntary cleanups. Sites on or proposed for listing on the federal Superfund program's National Priorities List (NPL) may not be subject to a voluntary cleanup agreement or consent order without the concurrence of EPA.

Tax incentives (abatements, credits, etc.): Tax increment financing (TIF) can be used by local governments that have jurisdiction over any part of a brownfields project.

Program Elements

Technical Elements

Methods/standards/controls: EPA Region 9 Preliminary Remediation Goals (PRGs) are used for initial screening. The criteria for selecting containment and cleanup actions, including monitoring and maintenance options to be followed under the VOAP, are identical to those under the hazardous substance cleanup program. No formal Risk-Based Corrective Action (RBCA) or comparable informal process is in place, but risk-based cleanups can be done via site-specific assessment with standards based on risk. Applicants can also request or develop standards based on future use.

Contaminants covered/excluded: Petroleum, asbestos, and polychlorinated biphenyls (PCBs) are covered. Lead paint

is covered if other hazardous substances are present. The Tennessee Brownfields Voluntary Cleanup Oversight and Assistance Program (VOAP) Statute covers hazardous substances, solid waste, or any other pollutant.

Use of long-term stewardship and institutional controls (IC): Tennessee has a long-term stewardship program for voluntary sites. The 2001 amendments to the VOAP allow for enforceable land-use restrictions.

- **IC Tracking:** Tennessee does have a tracking system for institutional controls.

- **IC Oversight and Monitoring:** The state reviews sites on a site-specific basis at least every five years. The results of the reviews are available to the public.

The following Web address is a direct link to the state's public database that maintains an inventory of sites, maps sites, and/or tracks institutional controls. This link also provides additional information regarding contaminated sites in the state.

<http://www.state.tn.us/environment/dor/pdf/promsite.pdf>

Management & Implementation Elements

Voluntary Cleanup Program MOA with EPA: No. However, the VOAP meets the requirements under CERCLA 128(b) regarding limitations under which U.S. EPA may take additional action

Costs to enter program or fees for service: Participants are charged a \$750 entry fee. Additional fees are charged per report or work product: Site Characterization—\$2,000; Remedial Action—\$2,500; Risk Assessment—\$2,000; Voluntary Agreement or Consent Order—\$3,000; Site Specific Ground Water Classification—\$2,000; Remedy Requirement Institutional Controls—\$500. Additionally, participants are charged a \$3,000 annual assessment if they remain in the program longer than one year.

Funding source for administrative costs and staff: The VOAP receives funding from federal cooperative agreements, the state general fund, and the state cleanup fund. Certain oversight costs are recovered from participants.

Cleanup Activities

Benefits (incentives to participate in the VCP, covenants not to sue, etc.): Parties successfully completing the program are afforded liability protection under all statutes contamination addressed in a consent order or voluntary agreement. Additionally, parties may be eligible for third party contribution protection provided they conduct appropriate actual or constructive notice.

Public Participation

Public participation requirements (notice, comment periods, etc.): Upon entering into a voluntary agreement or consent order, participants are required by statute to notify all local governments having jurisdiction over any part of the subject property and all owners of adjoining

properties by certified mail. If it is determined that a land use restriction is appropriate, a notice of land use restrictions must be mailed to all local governments having jurisdiction over any part of the subject property and to all owners of adjoining properties. Furthermore, if a participant desires to receive third party contribution protection, a notice summarizing the agreement must be published in a newspaper. In addition, a 30-day comment period must be provided for any interested party to respond.

Public participation activities (hearing, meetings, etc.): Public hearings and meetings occur on an ad hoc basis.

Statutory Authorities

For details visit: http://www.state.tn.us/environment/dor/pdf/voap_statute.pdf

APPENDIX C

Tennessee Development District Contacts

The 9 Development Districts (DD's) cover all 95 counties in Tennessee. The DDs' most important role is to identify needs of local communities. Based on these needs, the DDs work with their board members and local citizens to develop plans for their communities' economic development, to target and meet the most pressing needs, and to build community unity and leadership.

THINK ABOUT... *Contacting your local Development District to see if they plan on applying for Brownfields Grants.*

East Tennessee Development District

http://www.discoveret.org/etdd/front_page.htm

(865) 273-6003

Counties Served: Anderson, Blount, Campbell, Claiborne, Cocke, Grainger, Hamblen, Jefferson, Knox, Loudon, Monroe, Morgan, Roane, Scott, Sevier, Union

First Tennessee Development District

<http://www.ftdd.org/>

(423) 928-0224

Counties Served: Carter, Greene, Hancock, Hawkins, Johnson, Sullivan, Unicoi, Washington

Greater Nashville Regional Council

<http://www.gnrc.org/>

(615) 862-8828

Counties Served: Cheatham, Davidson, Dickson, Houston, Humphreys, Montgomery, Robertson, Rutherford, Stewart, Sumner, Trousdale, Williamson, Wilson

Memphis Area Association of Governments

No website available

(901) 729-2871

Counties Served: Fayette, Lauderdale, Shelby, Tipton

Northwest Tennessee Development District

<http://www.nwtddhra.org/index.htm>

(800) 750-6866

Counties Served: Benton, Carroll, Crockett, Dyer, Gibson, Henry, Lake, Obion, Weakley

South Central Tennessee Development District

<http://www.sctdd.org/>

(931) 381-2040

Counties Served: Bedford, Coffee, Franklin, Giles, Hickman, Lawrence, Lewis, Lincoln, Marshall, Maury, Moore, Perry, Wayne

Southeast Tennessee Development District

<http://www.sedev.org/www>

(423) 266-5781

Counties Served: Bledsoe, Bradley, Grundy, Hamilton, Marion, McMinn, Meigs, Polk, Sequatchie, Rhea

Southwest Tennessee Development District

<http://www.swtddd.org/>

(731) 668-7112

Counties Served: Chester, Decatur, Hardeman, Hardin, Haywood, Henderson, Madison, McNairy

Upper Cumberland Development District

<http://www.ucdd.org/>

(931) 432-4111

Counties Served: Cannon, Clay, Cumberland, DeKalb, Fentress, Jackson, Macon, Overton, Pickett, Putnam, Smith, VanBuren, Warren, White